

Exploratory Data Analysis Sample - Superstore:

Dataset Summary:

- **Total Rows:** 9994
- **Columns:** 21, including:
 - **Order Details:** Order ID, Order Date, Ship Date, Ship Mode
 - **Customer Details:** Customer ID, Customer Name, Segment, Region, City, State, Postal Code
 - **Product Details:** Product ID, Product Name, Category, Sub-Category
 - **Sales Metrics:** Sales, Quantity, Discount, Profit
- **Data Types:** A mix of integers, floats, and categorical variables.

Problem Statement:

The dataset captures transactional data from a retail store. The aim is to analyze sales performance and identify patterns or areas for improvement across different product categories, regions, and customer segments.

Scope:

1. **Sales Analysis:** Evaluate revenue generation across different categories, subcategories, and regions.
2. **Profitability Assessment:** Identify which products or regions are the most and least profitable.
3. **Customer Insights:** Understand customer purchasing behaviors across segments.
4. **Operational Efficiency:** Assess the impact of shipping modes and discounts on profitability.

Objective:

To derive actionable insights that can optimize sales strategies, improve profitability, and enhance customer satisfaction.

Expected Outcomes:

1. Key trends in sales and profit across regions, segments, and categories.

2. Identification of high-performing and underperforming products or regions.
3. Insights into the impact of discounts and shipping modes on profit margins.
4. Recommendations for strategic improvements to maximize revenue and customer retention.

Insight from Analysis:

1. The monthly sales peaked in November, with sales transactions reaching 352.4611k, whereas they were at their lowest in January, with transactions amounting to 94.92k.
2. The sales by category indicate that Technology sales are higher compared to those in Furniture and Office Supplies.
3. The sales of individual electronic products, particularly phones, are higher than those of other products.
4. The monthly profit from product sales is highest in December, while it is lowest in January.
5. The sales by profit ratio is highest in the consumer segment at 8.65, followed by the corporate segment at 7.67, and the home office segment at 7.12 respectively.